ABSTRACT

An optical system is able to achieve a substantially azimuthal polarization state in a lens aperture while suppressing loss of light quantity, based on a simple configuration. The optical system of the present invention is provided with a birefringent element (21) for achieving a substantially circumferential distribution or a substantially radial distribution as a fast axis distribution in a lens aperture, and an optical rotator (22) located behind the birefringent element and adapted to rotate a polarization state in the lens aperture. The birefringent element has an optically transparent member which is made of a uniaxial crystal material and a crystallographic axis of which is arranged substantially in parallel with an optical axis of the optical system. A beam bundle of substantially spherical waves in a substantially circular polarization state is incident to the optically transparent member.